

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A lock (1, 1') for a door of a motor vehicle comprising:
 - a closing mechanism (3) designed for coupling, in a releasable way, with a lock striker (2) for bringing about closing of [[said]] the door;
 - a mechanical actuating assembly (4) of said closing mechanism (3), which ~~comprises~~ including opening means (30, 38, 55, 57), for controlling release of said closing mechanism (3) from said lock striker (2), and means for inhibiting opening (41, 58), in turn including a first safety member (41) and a second safety member (58), that can be selectively activated for rendering said opening means (30, 38, 55, 57) ineffective, respectively, from outside and from inside the motor vehicle; and
 - electrical actuator means (5) ~~comprising~~ including a first output member (71) coupled with said first safety member [[(41);]] (41), said electric-actuator means (5) being housed in a fluid-tight way in a single casing (70) and said first output member (71) traversing, in a fluid-tight way, a through hole (73) of said casing (70) for co-operating with said first safety member (41); ~~characterized in that~~ (41), and said electric-actuator means (5) ~~comprise~~ including a second output member (72) coupled with said second safety member (58), housed in a fluid-tight way in said casing (70) and traversing in a fluid-tight way a further through hole (74) of said casing [[(70);]] (70), and ~~in that~~ wherein said casing (70) defines an area (70a) for housing a manual control device (82, 156) of said first output member (71) and an additional electrical control device (155) of said second output member (72), which provides a function of child safety of said lock (1, 1').

2. (Currently amended) The lock as claimed in claim 1, ~~characterized in that~~ wherein said casing (70) comprises at least two elements (77, 78), which can be coupled together with interposition of first sealing means (81).

3. (Currently amended) The lock as claimed in claim 2, ~~characterized in that~~ wherein said first sealing means (81) ~~comprise~~ includes a gasket (81) co-moulded on a perimetral portion (79) of one (77) of said elements (77, 78).

4. (Currently amended) The lock as claimed in claim [[2 or]] 3, ~~characterized in that~~ wherein said holes (73, 74) are made entirely on one (77) of said elements (77, 78) and house respective seal rings (103) co-operating with said output members (71, 72).

5. (Currently amended) The lock as claimed in ~~any one of the foregoing claims~~ claim 4, ~~characterized in that~~ wherein each of said first and second safety ~~member~~ members (41, 58) interacts with said opening means (30, 38, 55, 57) and is displaceable along a pre-set direction between a disabling configuration, in which it renders said opening means (30, 38, 55, 57) ineffective and an enabling configuration, in which it enables actuation of said closing mechanism (3) by said opening means (30, 38, 55, 57), and in that each of said first and second output ~~member~~ members (71, 72) is provided with a rotational motion about an axis (E, F) of its own, which is transverse to the direction of displacement of [[the]] said first and second safety ~~member~~ members (41, 58) and is provided, in a position corresponding to an external end (110, 111) of its own projecting from said casing (70), with a portion (75, 76) for interaction with the relative said safety member (41, 58), said interaction portion (75, 76) being eccentric with respect to said axis (E, F).

6. (Currently amended) The lock as claimed in claim 5, ~~characterized in that wherein~~ said interaction portion (75, 76) is fixed to an end element (114, 115) coupled in an axially fixed position and in an axially mobile way on said external end (110, 111) of the relative said output member (71, 72) and is kept in a pre-set angular position on the external end (110, 111) by [[said]] elastic means (116, 117).

7. (Currently amended) The lock as claimed in claim [[5 or]] 6, ~~characterized in that wherein~~ said interaction portion is a pin (75, 76) engaged with a through hole (53, 67) of the relative said safety member (41, 58).

8. (Currently amended) The lock as claimed in ~~any one of the foregoing claims~~ claim 7, ~~characterized in that wherein~~ said opening means ~~comprise~~ includes a first actuating mechanism (31) and a second actuating mechanism (32), which can be connected, respectively, to an external handle and an internal handle of said door for controlling release of said closing mechanism (3) from said lock striker (2) respectively from outside and from inside the motor vehicle, said first and second safety member (41, 58) being respectively available in a corresponding said disabling configuration for rendering the respective said first actuating mechanism (31) and said second actuating mechanism (32) ineffective, providing, respectively, an external-safety function and an internal-safety function.

9. (Currently amended) The lock as claimed in ~~any one of the foregoing claims~~ claim 8, ~~characterized in that wherein~~ said first and second output members (71, 72) have parallel axes (E, F) and are actuated by respective electrical control devices (87, 88).

10. (Currently amended) The lock as claimed in ~~any one of the foregoing claims~~ ~~claim 9, characterized in that wherein~~ said casing area (70a) of said casing (70) is set on one opposite side of said second output member (72) with respect to said first output member (71), and in that said second output member (72) carries a first attachment element (167), which can be connected to said additional electric-control device (155), and a second attachment element (133) which can be connected to said manual-control device (82, 156), said first attachment element (167) being angularly mobile with respect to said second output member (72) and said second attachment element (133) being angularly mobile with respect to said second output member (72) and angularly coupled with said first output member (71).

11. (Currently amended) The lock as claimed in ~~any one of the foregoing claims~~ ~~claim 10, characterized in that wherein~~ said casing (70) integrally defines an insulating body (149) of an electrical connector (148) for connection of said electrical actuator means (5) with an electrical wiring system of the motor vehicle.

12. (Currently amended) The lock as claimed in claim [[12]] 11, ~~characterized in that wherein~~ said casing (70) houses a plurality of warning elements (143, 144, 145, 146, 173) for signalling the operating condition of components of said first lock (1, 1'), and an electrical circuit (147) for connection of said electric-actuator means (5) and said warning elements (143, 144, 145, 146, 173) with said electrical connector (148).

13. (Currently amended) The lock as claimed in claim 12, ~~characterized in that wherein~~ said warning elements comprise a plurality of microswitches (143, 144, 145, 146, 173), each of which has an insulating portion (154) fixed to said casing (70) and electrical-connection means (150) for connection to said electrical circuit (147) projecting from said insulating portion (154) and embedded in a resin.

14. (Currently amended) The lock as claimed in claim [[12 or]] 13, characterized in that wherein said electrical circuit (147) comprises a plurality of conductive paths (152) carried by a flexible support made of insulating material (153) fixed to said casing (70).